ENCLOSURE

COMMENTS ON ELK HILLS POWER'S APRIL 2012 RESPONSE TO EPA'S MARCH 2012 LETTER

- **1. Summary Section, page 4, Formation Testing Program:** Response is acceptable, but copies of the fall-off test (FOT) reports were not included in the updated permit application. The most recent FOT should be presented and discussed in Attachment I. Please provide this information and include a copy of the most recent FOT report in a revised application.
- 2. Summary Section, page 5, Plugging and Abandonment Program and Results: Response is acceptable, but please provide schematics of the proposed plugging and abandonment plan of the three wells, including depths of the cement plugs, injection zone, and underground sources of drinking water (USDWs), if present.
- 3a. Summary Section, Wells within the Area of Review, pages 9 and 10: Response is acceptable.
- **3b.** Attachment D, Documentation of the aquifer exemption for the Tulare Formation: As was discussed between EPA and EHP representatives at our meeting on September 17, 2014, the Tulare Formation in the Elk Hills field is not an exempt aquifer for the purposes of Class I UIC injection. EPA's UIC regulations require that Class I wells inject below the lowermost underground source of drinking water (see 40 CFR GIVE CITATION). Therefore, your current proposal to continue injection into this formation will require you to submit an aquifer exemption request, for EPA's consideration. As a follow up to our meeting we provided EHP with EPA's July 2014 Aquifer Exemption checklist via email on September 22, 2014. The checklist outlines the aquifer exemption regulatory criteria and the supporting data/analyses required for EPA's consideration of any aquifer exemption request. We are available to meet and discuss this further with you and your consultants, should you wish to do so.
- **4.** Attachment F, Lithology of the Confining Interval and Lithology of the Injection Interval: Permeability data from fall-off testing was added to the discussion as requested. The lowest permeability from the most recent FOT data in 2011 is 1,419 millidarcies (md) rather than 1,695 md as reported in the discussion of Tulare Zone Lithology on page 19. Please correct the lowest permeability value accordingly.

The depths to the top and bottom of the Tulare injection zones in the 25-18G and 35-18G wells are not provided and there is no discussion of the Tulare Formation porosity data based on well logs run in those wells. Please add this information into Attachment F, and update the geologic maps and cross sections based on the data obtained from the drilling and installation of the injection wells.

The application states that wireline logs were not run in the 25A-18G and 35A-18G wells. Please provide any other logs of those wells in the revised application.

- **5.** Attachment I, page 30-3: Response is acceptable, but the results of the most recent FOT should be added to the tables.
- 6. Attachment I, page 32, 4th paragraph, 4th sentence, minor comment: Response is acceptable.
- 7. Attachment I, page 33, Well # 35-18G: Response is acceptable
- **8. Attachment Q, Plugging and Abandonment Plan:** Response is acceptable except for a typo on EPA Form 7520-14 for Well 35-18G, and the omission of contingency costs in the third-party plugging and abandonment (P&A) cost estimate. The typo is the placement of the hole-size in the box for the

calculated top of the cement plug. Please correct the typo. Also, please add contingency costs, and any increases due to inflation since 2012, to the P&A cost estimates for each well.

- **9. Attachment R, Necessary Resources:** Response is subject to EPA review after the addition of contingency costs and any appropriate inflation adjustment, as discussed in Comment 8, above.
- 10. Attachment S, Aquifer Exemptions: Please refer to Comment 3b, above.

COMMENTS ON ELK HILLS POWER AUGUST 2012 RESPONSE TO EPA COMMENTS FROM THE MAY 8, 2012 CONFERENCE CALL

- 1. Summary, page 1, paragraph 5, sentence 3, a: Response is acceptable.
- 2. Attachment M, page 40, Procedures, a: Response is acceptable.
- 3. Attachment Q, page 45, Plugging and Abandonment Program, paragraph 1, sentence 3, a: Response is acceptable.
- 4. Exhibit Q-3, a and b: Responses are acceptable.
- 5. Exhibit Q-4, a: Refer to Comment 8 above.
- 6. Exhibit R-1, page 1, a: Refer to Comment 9 above.
- 7. Attachments D and S, Tulare Aquifer Exemption, a and b: Refer to Comment 3b, above.